



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,832	02/01/2006	Wataru Takahashi	39626	8007
52054 7590 04/09/2007 PEARNE & GORDON LLP 1801 EAST 9TH STREET SUITE 1200 CLEVELAND, OH 44114-3108			EXAMINER KERNS, KEVIN P	
			ART UNIT	PAPER NUMBER
			1725	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/09/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,832	<b>Applicant(s)</b> TAKAHASHI ET AL.	
	<b>Examiner</b> Kevin P. Kerns	<b>Art Unit</b> 1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2006 and 13 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/1/06, 3/13/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

In this instance, the examiner cannot consider JP 60-157078 since the applicants have not provided a copy of this reference, and the search report does not include reference "kind codes" (A, A1, B, U etc.). For example, a search for the above reference (when using the kind code A) does not uncover a reference that would be

pertinent to this application. On the other hand, JP 2003-285167 and JP 2004-223576 (both of which have kind code A) have been provided by the examiner in the PTO-892. As a result, the applicants are suggested to provide a copy of JP 60-157078 (which is "crossed-through" in the IDS of February 1, 2006) in their response to this Office Action.

### ***Drawings***

2. Figures 3 and 4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "3a" (see paragraphs [0027], [0029], and [0031]). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of

Art Unit: 1725

an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

4. The abstract of the disclosure is objected to because the 4th line includes two consecutive instances of "the number". Correction is required. See MPEP § 608.01(b).
5. The disclosure is objected to because of the following informalities: in paragraph [0012], 5th line, replace "101a" with "101" to be in agreement with Figure 3. In paragraph [0032], 2<sup>nd</sup> line, replace "boy" with "body". Appropriate correction is required.

### ***Claim Objections***

6. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In this instance, the claim 3 limitation "said sensor cable is accommodated in said robot main body driving power cable" does not further limit the limitations set forth in the last 3 lines of independent claim 2.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicants' admitted prior art (AAPA – paragraphs [0004]-[0011] of specification; and "Prior Art" Figures 3 and 4) in view of JP 2003-285167 (complete translation of this Japanese document is provided with this Office Action).

The applicants' admitted prior art (AAPA) discloses an arc welding robot that comprising a robot main body 101 including a welding torch 104 and a wire feeder 105 for feeding welding wire to the welding torch 104 (Figure 3), with the wire feeder 105 further including a sensor (feeder sensor cable 103b and wire feeder encoder 105f) and

a wire feeder motor 105a (Figure 4); a robot controller 102 that controls the robot main body 101; a welding power supply 103 arranged inside the robot controller 102, with the welding power supply 103 controlling the wire feeder 105 and a welding power; a robot main body driving power cable 102a and a robot control cable 102b that are connected between the robot controller 102 and the robot main body 101; and a welding voltage feedback cable 105e and a gas valve control cable 105d for a shield gas supplied to the welding torch 104 that are separately (in a dispersed fashion) accommodated within the robot main body 101 (AAPA; paragraphs [0004]-[0011] of specification; and "Prior Art" Figures 3 and 4). The applicants' admitted prior art (AAPA) does not disclose that the wire feeder sensor cable is accommodated within the robot main body, rather than provided directly from the robot controller (see comparative Figure 1 versus Figure 3, as well as Figure 2 versus Figure 4).

However, JP 2003-285167 discloses a power supply mechanism for a welding robot, in which the welding robot includes a robot base 2, a welding torch 18 and associated wire feeder 22, and a robot main body arranged therebetween; a power cable 3 (outside robot main body 3A and inside robot main body 3B); and many control cables 4 (see paragraph [0023]) that include motion detectors/sensors for respective robot joint and wire feeder motors, such that these sensed parameters are sent to and analyzed by a controller 20, with the plurality of control cables (including sensors) that are accommodated within the robot main body being advantageous for improving durability without imparting slack to the power and control cables, thus reducing twisting

of cables and improving the welding efficiency (abstract; paragraphs [0010]-[0036] of translation; and Figures 1 and 4).

It would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to modify the arc welding robot disclosed by the applicants' admitted prior art (AAPA), by using the plurality of control cables (including a wire feeder sensor cable) that are accommodated within the robot main body, as taught by JP 2003-285167, in order to improve durability without imparting slack to the power and control cables, thus reducing twisting of cables and improving the welding efficiency (JP 2003-285167; abstract; paragraphs [0017] and [0034]-[0036] of translation).

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Shimogama, Sasano, Okamoto et al., Inoue et al., EP 0 386 791 A2, and JP 2004-223576 references are also cited in PTO-892.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns* 4/2/07  
Primary Examiner  
Art Unit 1725

KPK  
kpk  
April 2, 2007